
Brainstorming Activities

Topic: Priority jobs for improvement

Based on your current knowledge, list the priority areas in your facility that an ergonomics program should address:

- 1.
- 2.
- 3.
- 4.
- 5.

Topic: Discovering priorities

What additional information do we need to identify priority areas?

- 1.
 - 2.
 - 3.
 - 4.
 - 5.
-

Topic: Gaining management commitment

The term “management commitment” is used frequently, but can be somewhat vague. What does “management commitment” really mean as related to ergonomics?

A. List five examples of concrete actions or activities that show management commitment to ergonomics. (Pretend you are a government inspector investigating an employer. What evidence would convince you that management is committed to ergonomics?)

- 1.
- 2.
- 3.
- 4.
- 5.

B. How should TeamErgo go about getting management commitment for the ergonomics program at your facility? List five ways of obtaining this commitment.

- 1.
 - 2.
 - 3.
 - 4.
 - 5.
-

Topic: Gaining Management Commitment

This is a quick exercise to help people understand the financial costs associated with poor ergonomics:

1. List the types of adjustment that are available in cars to accommodate different sizes of people:
 2. How do you feel when you drive a car that is not adjusted for you?
 3. What would happen if you drove eight or 10 hours per day, day after day, in a position that was not right for you?
 4. What would you do if you went to a car dealer to buy a new car and the seat was not adjustable, not even forward and backward?
 5. What happens when employees work in awkward and uncomfortable positions?
-

Topic: Dovetailing with other initiatives

This is a very important exercise.

	What else is going on in your facility?	How does the ergonomics process support and take advantage of that activity?
<u>Examples:</u>		
Organizational Mission Statement(s)		
Major Organizational Goals		
Training		
Quality Improvement		
Efficiency		
Empowerment (or teams)		
Cultural Change		
Employee Relations		
Facility Renovations or Expansions		
Other		

List five ways in which you will deliberately structure the ergonomics process in your facility to fit into these activities.

- 1.
- 2.
- 3.
- 4.
- 5.

How will you identify these issues in the presentations and training that you will conduct?

Topic: Ensuring employee participation

What type of employee participation would you want to see in an ergonomics program? List three examples:

- 1.
- 2.
- 3.

How could you ensure this participation?

- 1.
- 2.
- 3.

Topic: Early recognition of employees with Musculoskeletal Disorders (MSDs)

Current medical advice is that the sooner a person with an emerging MSD is recognized, the easier (and cheaper) it is to treat. To accomplish this involves a change in our traditional philosophies (“Why have a pain checked out; maybe it’ll go away.” or “I’ll wait till it’s a real problem before I go see the doctor.”) as well as our organizational systems.

What happens now in your facility when employees experience symptoms of MSDs?

What tangible steps could be taken in your organization to (a) encourage early reporting and (b) respond appropriately? (List three; there are potentially many more.)

- 1.
- 2.
- 3.

What obstacles will you need to overcome to initiate or improve these steps in your organization? (List three.)

- 1.
 - 2.
 - 3.
-

Topic: Communications

This is an especially important worksheet.

List five mechanisms that exist in your facility that are used for communications. (Example: cafeteria bulletin board)

- 1.
- 2.
- 3.
- 4.
- 5.

For each of these, how exactly can you use them to promote ergonomics?

	<u>Particular strength of this mechanism</u>	<u>Types of messages that fit this mechanism best</u>	<u>Person Responsible</u>	<u>Deadline</u>
Example: Bulletin Board	Everyone goes by at least once/wk.; easy to change	Before-and-after photos	Pat	18 th

- 1.
- 2.
- 3.
- 4.
- 5.

(Good communications isn't hard; you just need to plan for it.)

20 Steps to Develop a Plan

This list is to help you put on paper things you are doing or planning. You don't need to address every question.

Organization and management commitment

1. How we are (intend to be) structured is:
2. How we have assigned (will assign) responsibility is:
3. The resources we provide (will provide, etc.) to the ergonomics effort are:
4. Other ways we demonstrate commitment are:
5. How we involve employees in our ergonomics process is:
6. How ergonomics dovetails with other initiatives and activities in our facility is:
7. The training that site personnel have received (will receive) is:

<u>Group</u>	<u>Topics</u>	<u>Amount of Time</u>
TeamErgo		
Managers/Supervisors		
Nurses		
Purchasing/Facilities		
Employees		

Communication

8. The approaches we take to inform the entire facility of our activities are:

9. We keep abreast of developments in other facilities by:

10. The steps we take to encourage early reporting of MSDs are:

Identifying issues and improvements

11. The way we respond to reports of MSDs and MSD risk factors is:

12. The key records we analyze to identify ergonomic problems are:

13. Other steps we take to identify problems and set priorities are:

14. The process we use to evaluate tasks and solve problems can best be described as:

Improvements

15. The process we use to set timetables to make changes and track progress is:

16. Administrative programs we use to reduce CTDs are:

Medical management

17. We provide medical care services to our employees with CTDs in the following way:

18. We involve medical providers in our ergonomics program by:

19. The system we use to provide work for employees with restrictions is:

Measuring progress

20. The methods we have chosen to measure our progress are:

Summary

Where we have been to date is:

The two or three most important things we have to do (or barriers we have to overcome) are:

The two or three major unanswered questions on implementing our ergonomics program are:

The two or three immediate steps we need to take are:

Ergonomics Quarterly Planning Guide and Progress Report

Location: _____ Quarter _____ Year _____

Directions: At the beginning of each quarter, list the activities you intend to do. At the end of the quarter, list what you accomplished, and develop your goals for the next quarter. If you do not meet a particular goal (which is expected in some cases), simply describe the reason why not.

1. Overall program

Based on a review of your written program and overall implementation plan, what are your plans this quarter to address your overall program development?

Examples:

Conduct employee surveys, Initiate supervisor training, Review injury/illness records

Goals	Accomplishments <i>(to be completed at end of quarter)</i>

2. Training

What training sessions/safety talks will be conducted this quarter? (Who and how many people?)

Goals	Accomplishments

3. Workstations evaluations (using Ergonomics Worksheet)

Based on your priorities, what work areas will a team evaluate this quarter?

Goals	Accomplishments

4. Actions

Based on the above evaluations, what improvements are planned?

Goals <i>(items may need to be added during committee meetings as the quarter progresses)</i>	Accomplishments

5. Major Project(s)

For on-going major projects that will take longer than one quarter to address, what steps will be taken this quarter?

Goals	Accomplishments

6. Other

Are there any other plans? *(Or at end of quarter: Did you have any other accomplishments?)*

Goals	Accomplishments

7. Things that work

Of the things that you worked on this past quarter, did anything go particularly well? What was the greatest insight you gained?

8. Obstacles

Were there any particular obstacles?

Program Audit

1. Organization	Points		Comments
	Possible	Earned	
A. Management Responsibility			
1. Does upper management:			
a. Clearly assign responsibility for program elements?	1		
b. Monitor progress on ergonomics projects, program implementation, etc.?	1		
c. Review ergonomics issues in staff meetings?	1		
1. Are ergonomics issues included in performance reviews for all managers?	1		
2. Does this facility have an ergonomics coordinator?	1		
3. Does the coordinator meet at least monthly with top management?	1		
4. Has an ergonomics budget been established for this facility?	1		
5. Has a special ergonomics maintenance crew (or person) been assigned?	1		
B. TeamErgo			
1. Does TeamErgo:			
a. meet regularly to coordinate functioning of all program elements?	1		
b. review and update program goals and objectives at least quarterly and set priorities for action?	1		

Award partial points (e.g., ½) when appropriate.

Organization (continued)	Points		Comments
	Possible	Earned	
c. provide systematic and organized follow-up on implementing ergonomic solutions?	1		
2. Are minutes kept to summarize discussions, document decisions made, and define action items?	1		
C. Employee Involvement			
1. Are hourly employees or union representatives actively involved in the program?	1		
2. Are employee suggestions sought and used in the program?	1		
3. Are employee meetings held to get input before plant floor changes are made?	1		
4. Are employees provided opportunity for input when job evaluations are made?	1		
D. Written Program			
1. Are top managers and staff familiar with the written program?	1		
2. Is the site's written program reviewed whenever significant changes are made in personnel, operations, or plant layout; or at least annually?	1		
3. Are specific goals outlined in an annual operations plan?	1		
4. Is the ergonomics program well-integrated with other activities?	1		
Total Points for Organization	20		

2. Training	Points		Comments
	Possible	Earned	
1. Have all superintendents, managers, supervisors and engineers received overview training on: <ul style="list-style-type: none"> a. the ergonomics program and activities? b. basic ergonomic principles? c. cumulative trauma disorders? d. the need for early medical intervention? e. the importance of adhering to employee medical restrictions? 	2		
2. Additionally, have all TeamErgo members received training on: <ul style="list-style-type: none"> a. program guidelines? b. general ergonomics? c. cumulative trauma? d. job evaluations/problem solving? 	2		
3. Have all medical providers been trained in the medical management program?	2		
4. Have maintenance personnel been trained in ergonomics?	1		
5. Are all employees and new hires: <ul style="list-style-type: none"> a. provided overview ergonomics training? b. told of the necessity of reporting symptoms? 	2		

Training (continued)	Points		Comments
	Possible	Earned	
<p>c. shown how to properly use tools and equipment?</p> <p>d. shown the best ergonomic methods to perform specific tasks?</p> <p>6. Is there follow-through to check up on the work skills of new hires and re-instruct as necessary?</p> <p style="text-align: center;">Total Points for Training</p>	1		
3. Communications			
<p>1. Are updates on ergonomics activities provided to employees thru bulletin boards or newsletters?</p> <p>2. Are updates on activities regularly supplied to meetings of managers, supervisors, employees, etc.?</p> <p>3. Is feedback on the status of ideas and suggestions given to affected employees and supervisors?</p> <p>4. Is credit given to project teams and originators of ideas?</p> <p>5. Are minutes of TeamErgo meetings distributed to key people?</p> <p>6. Do plant representatives attend all appropriate conferences (corporate meetings, trade association, meetings, etc.)?</p> <p style="text-align: center;">Total Points for Communications</p>	2 3 2 1 1 1		
	10		

4. Job Analysis	Points		Comments
	Possible	Earned	
1. Are OSHA 300 logs and other records analyzed periodically for:	2		
a. MSDs by job and type?			
b. rates calculated?			
c. graphs plotted to compare jobs or departments?			
d. high injury jobs targeted?			
2. Are employee discomfort surveys conducted in targeted areas and results analyzed and used?	1		
3. Are <i>Ergonomics Innovation Worksheets</i> (or equivalent) used and kept on record?	1		
4. Are videotapes made of jobs in conjunction with these checklists and reviewed in brainstorming sessions?	2		
5. Are plant or area surveys conducted at least monthly to identify issues?	1		
6. Whenever plant or equipment changes are planned, is ergonomics made part of the planning process (employees and committee members involved, <i>Ergonomics Innovation Worksheets</i> used, other plant coordinators contacted, etc.)?	2		
7. Is experience with turnover and unpopular jobs evaluated to help set priorities for job improvements?	1		
Total Points for Job Analysis	10		

5. Job Improvements	Points		Comments
	Possible	Earned	
1. Is there at least one major ergonomics project in active progress?	3		
2. Are easy-to-implement changes made, even though not necessarily high priority issues?	3		
3. Are suggestions for improvements implemented from:			
a. completed <i>Ergonomics Innovation Worksheets</i> ?	2		
b. employee meetings?	2		
c. supervisor meetings?	2		
d. managers, superintendents, and engineers?	2		
4. Are all job improvements (and unsuccessful attempts) entered on the Ergonomics Log?	1		
5. Have administrative changes been made to reduce CTD risk factors (less overtime, job rotation, etc.)	1		
6. Are costs of turnover, absenteeism, CTDs, poor quality, etc. included to justify investment in plant and equipment changes?	1		
7. Are developments in your industry and general industry being monitored for useful ideas?	1		
8. Are brainstorming sessions regularly held (watching videos of tasks)?	2		
Total Points for Job Improvements	20		

6. Medical Management	Points		Comments
	Possible	Earned	
1. Are designated health care providers available at this facility?	1		
2. Do medical providers perform regular workplace walkthroughs?	1		
3. Are employees in targeted areas provided physical examinations for MSD symptoms?	1		
4. Are employees encouraged to report symptoms of MSDs?	2		
5. When an employee reports MSD symptoms does:			
a. the medical provider conduct a physical examination?	3		
b. the medical provider treat the employees in accordance with the treatment algorithms for upper extremity complaints?	3		
6. When an employee is placed on restricted duty, is the job reviewed to assure appropriateness?	2		
7. Are exercise programs used for warm-up and stretch breaks?	1		
8. Are work hardening practices followed in returning workers from restricted duty?	1		
9. Are new hires and those returning from injury allowed break-in periods to recondition themselves for job demands?	1		
10. Is the OSHA 200 Log accurate and up-to-date?	4		
Total Points for Medical Management	20		

7. Monitoring Progress	Points		Comments
	Possible	Earned	
1. Can you document improvements in any of the following: a. reduced MSD rates? b. reduced turnover? c. reduced absenteeism? d. increased efficiency? e. increased quality? f. increased morale? g. employee discomfort surveys?	2		
2. Are MSD rates graphed quarterly to compare trends?	2		
3. Are ergonomics logs of improvements summarized and communicated to plant personnel?	2		
4. Have slides, photos, or videotapes been made of before-and-after changes?	2		
5. Have any quantitative studies been made of before-and-after changes?	2		
Total Points for Monitoring Progress	10		
Grand Total Points	100		

Ergonomics Innovation Worksheet

(Make sure to explain your purpose to the employees at the task you are evaluating)

Area _____ Date of Evaluation _____

Task _____ Shift 1 ___ 2 ___ 3 ___

Steps of the task

_____	_____	_____
_____	_____	_____
_____	_____	_____

Ergonomics Issues

Ideas for Improvement or Comments

1. Awkward postures?

bent wrists

elbows from body

bent/twisted back

bent neck

2. Excessive forces?

grasping or pinching forces

push/pull arm forces

loads on back

3. Anything not in easy reach?

reach envelope:

- full arm

- fore arm

4. Not at right height?

over shoulders/below knees

elbow height

equipment height relationships

5. Excessive motions?

hands

arms

back

Ergonomics Issues**Ideas for Improvement or Comments****6. Unnecessarily fatiguing?**

static loads:

- grip

- arm

7. Pressure points?

tool grip

hard edges/surfaces

hard floor

8. Poor clearance and access?

bump/not fit

can't see

9. Freedom to move & stretch?

Constant sitting

Stand in one place

10. Uncomfortable environment?

vibration

temperature extremes

glare, shadows, too bright or dark

Additional Information

What suggestions and feedback do employees/supervisors have?

Have there been injuries reported from this task?

- If so, how many?
- What have you learned from reading Injury/Illness Report
- What have you learned from additional discussions with the person(s) reporting the injury?

Where do employees typically experience the most discomfort, if any?

hands/ wrists	__ none	__ low	__ medium	__ high
elbows/forearms	__ none	__ low	__ medium	__ high
shoulders	__ none	__ low	__ medium	__ high
neck	__ none	__ low	__ medium	__ high
back	__ none	__ low	__ medium	__ high
legs	__ none	__ low	__ medium	__ high
feet	__ none	__ low	__ medium	__ high

What are the top 2-3 issues for this task?

Use the attached sheets to help brainstorm possible improvements. Make as many copies as needed.

Issue _____

Options for Improvement

(List as many as you can. Include "hair-brained" ideas to stimulate creativity.)

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Action Items:

Short Term

Long Term

_____	_____
_____	_____
_____	_____
_____	_____

Sketch

What can you "try-storm" right now?

(that is, what can you mock up to test an idea)

Issue _____

Options for Improvement

(List as many as you can. Include "hair-brained" ideas to stimulate creativity.)

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Action Items:

Short Term

Long Term

_____	_____
_____	_____
_____	_____
_____	_____

Sketch

What can you "try-storm" right now?

(that is, what can you mock up to test an idea)

Issue _____

Options for Improvement

(List as many as you can. Include "hair-brained" ideas to stimulate creativity.)

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Action Items:

Short Term

Long Term

_____	_____
_____	_____
_____	_____
_____	_____

Sketch

What can you "try-storm" right now?

(that is, what can you mock up to test an idea)

Innovation Potential

For each of the issues you identified above, use the forms on the following pages to brainstorm ideas and list as many options for improvement that you can think of. Use the following questions to stimulate your creativity.

Probing questions

What improved types of tools are possible?

What types of mechanical assists might be used?

What changes in layout would help?

What changes in product or packaging design would help?

Would improvements in the overall material handling system help?

Would changes in the overall work process help?

Is there a completely different way of doing the job?

Mindset questions

If you were a Yankee inventor living in 1820 and had no electricity or power, how would you do this job?

If you had unlimited resources, what would you do?

If there is an automatic way of doing this task, but is too expensive or not feasible in this case, can you think of some half-way modification that *is* feasible?

Have you ever seen a different way of doing this task?
What implications does that have in this case?

Does a similar task exist in another industry? How do they do it there? What are the implications for you?

Ergonomics Innovation Worksheet

Department _____ Date _____

Task _____ Shift 1st _____ 2nd _____ 3rd _____

Steps of the task

Ergonomics Issues

Directions: This column serves as a "mind-jogger" and a systematic method to help you focus and identify issues. The purpose is not to document precise job conditions or make firm distinctions between low, medium, and high. The purpose is to help you reflect on all the issues and to prompt you to think about ways to make improvements.

Back

Repetitive back motions low medium high

Loads or forces on back

lifting	<input type="checkbox"/> low	<input type="checkbox"/> medium	<input type="checkbox"/> high
carrying	<input type="checkbox"/> low	<input type="checkbox"/> medium	<input type="checkbox"/> high
pushing	<input type="checkbox"/> low	<input type="checkbox"/> medium	<input type="checkbox"/> high
pulling	<input type="checkbox"/> low	<input type="checkbox"/> medium	<input type="checkbox"/> high

Awkward postures

bending	<input type="checkbox"/> low	<input type="checkbox"/> medium	<input type="checkbox"/> extreme*
bent neck	<input type="checkbox"/> low	<input type="checkbox"/> medium	<input type="checkbox"/> extreme
twisting	<input type="checkbox"/> low	<input type="checkbox"/> medium	<input type="checkbox"/> extreme

(* or constant)

Whole body vibration low medium high

Arm

Left

Push/pull force light medium heavy

Static load on shoulder none occasional constant

Arm motions low medium high

Elbow away from body neutral medium extreme

Pressure point (forearm) light medium heavy

Right

Push/pull force light medium heavy

Static load on shoulder none occasional constant

Arm motions low medium high

Elbow away from body neutral medium extreme

Pressure point (forearm) light medium heavy

Ideas for Improvement or Comments

Directions: This side of the page is the more important side. List as many things as you can think of to make improvements. Even if you check an item as "low" you may still think of a low cost improvement that makes sense. But especially if you think some issue is a "yes", "high", or "extreme", list ideas. Don't worry about feasibility (yet); just write down ideas.

Sample ideas

- raise load off floor
- lower load height
- change load shape
- add hand holds
- use scissors lift
- use power tilter
- change layout
- tilt the surface
- mechanical arm
- vacuum hoist
- reduce weight
- add a person
- use cart
- use conveyor

Sample ideas

- change layout
- improve heights
- smaller surface
- cutout
- fixture the part
- fixture the tool
- counter-balancer
- mechanical assist
- tilt work surface
- arm rest
- angle tool handle
- pad hard edges

Ergonomics Issues

Tool Design

- Grip excessively large or small? no yes
- Sharp edges or pressure points on grip? no yes
- Shock or vibration when used? no yes
- Is tool heavy to hold? no yes
- Designed for right-handers only? no yes

Work Methods

- Are there significant differences in the way various employees do the job? no yes
- If yes, is one method better? no yes
- If yes do any employees need additional training to help improve smooth work methods? no yes
(Answering these questions may take significant study.)

Environmental

- Poor lighting; shadows no yes
- Glare; too bright no yes
- Floor needs repair / unusually slippery no yes
- Temperature extremes; drafty, etc. no yes

Red Flags

- Equipment not functioning smoothly no yes
- Product Piled Up no yes
- Double-handling no yes
- Employee quick fixes (tape, cardboard, rags, etc.) no yes

Administrative Changes

- Job enlargement
- Job rotation
- More frequent, short rest breaks
- Exercise breaks
- Reduced workload

Ideas for Improvement or Comments

- dampen vibration
- smaller tool
- larger tool
- modify tool handle
- use torque bar
- counter balance tool
- lighter tool
- fixture tool
- ambidextrous tools

- videotape employees
- employee meetings
- standardize layout
- motion analysis study
- employee training

- ventilation diffusers
- glare guards
- task lighting
- replace lights
- better housekeeping
- floor maintenance

- maintenance needed
- balance work load
- balance work flow
- poor quality parts

Employee Discomfort

Where do employees typically experience the most discomfort, if any?

hands/ wrists	<input type="checkbox"/> none	<input type="checkbox"/> low	<input type="checkbox"/> medium	<input type="checkbox"/> high
elbows/forearms	<input type="checkbox"/> none	<input type="checkbox"/> low	<input type="checkbox"/> medium	<input type="checkbox"/> high
shoulders	<input type="checkbox"/> none	<input type="checkbox"/> low	<input type="checkbox"/> medium	<input type="checkbox"/> high
neck	<input type="checkbox"/> none	<input type="checkbox"/> low	<input type="checkbox"/> medium	<input type="checkbox"/> high
back	<input type="checkbox"/> none	<input type="checkbox"/> low	<input type="checkbox"/> medium	<input type="checkbox"/> high
legs	<input type="checkbox"/> none	<input type="checkbox"/> low	<input type="checkbox"/> medium	<input type="checkbox"/> high
feet	<input type="checkbox"/> none	<input type="checkbox"/> low	<input type="checkbox"/> medium	<input type="checkbox"/> high

Do you observe anyone . . .

- rubbing their elbow or shoulder?
- "shaking out" their hands?
- looking as though they are in discomfort?
- having red marks, blister, or welts from contact stress?

Employee and Supervisor Input

What are the employee's or supervisor's impressions of what the issues are?

What are their ideas for improvement?

Quality and Efficiency

Do any of the ergonomic issues reduce the ability of the employee(s) to do their jobs efficiently and correctly? (wasted time, errors, scrapped product, needless work, lower yields, extra costs, etc.?) no yes
(Answering these questions may take significant study.)

Overall

Have you videotaped the task? Yes No

At this point, it is often best to adjourn to a conference room, watch the videotape multiple times as you complete the rest of the worksheet.

Based on this evaluation, what are your overall conclusions?

Compared with other jobs in this facility, the ergonomic risk factors are: low medium high

What are the top 3 - 5 issues for this job?

Have you identified any quick fixes?

Example
High grasping force to squeeze pliers

Example
Provide floor mat

Use the attached sheets to help brainstorm possible improvements. Make as many copies as needed.

Issue _____

Options for Improvement

(List as many as you can. Include "hair-brained" ideas to stimulate creativity.)

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Action Items:

Short Term

Long Term

_____	_____
_____	_____
_____	_____
_____	_____

Sketch

What can you "try-storm" right now?

(that is, what can you mock up to test an idea)

Issue _____

Options for Improvement

(List as many as you can. Include "hair-brained" ideas to stimulate creativity.)

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Action Items:

Short Term

Long Term

_____	_____
_____	_____
_____	_____
_____	_____

Sketch

What can you "try-storm" right now?

(that is, what can you mock up to test an idea)

Ergonomics Self-Evaluation Worksheet

Take a close look at each step of the task you are doing. Are there ways to modify the workstation, tools, or equipment to make it better for you? Ask yourself:

1. Do any specific aspects of the job cause discomfort or frustration?
2. Can I make any adjustments or changes by myself with the equipment at hand?
3. Do I have any ideas that could be passed on to a Team Leader or Engineer?

Department _____ Date _____

Task _____ Shift 1st ____ 2nd ____ 3rd

Your name _____

*Not all ideas will be feasible,
but all ideas will be given consideration.*

Ergonomic Issue	Things I Can Do	Ideas for Engineering Improvements
<p>1. Awkward postures?</p> <p>bent wrists</p> <p>elbows from body</p> <p>bent/twisted back</p> <p>bent neck</p>		
<p>2. Excessive forces?</p> <p>grasping or pinching forces</p> <p>push/pull arm forces</p> <p>loads on back</p>		
<p>3. Excessive motions?</p> <p>hands</p> <p>arms</p> <p>back</p>		
<p>4. Anything not in easy reach?</p> <p>reach envelope</p>		
<p>5. Not at right height?</p> <p>elbow height</p> <p>height relationships</p>		

Ergonomic Issue	Things I Can Do	Ideas for Engineering Improvements
<p>6. Unnecessarily fatiguing?</p> <p>exhausting</p> <p>static loads: - grip - arm</p>		
<p>7. Pressure Points?</p> <p>tool grip</p> <p>hard edges/surfaces</p> <p>hard floor</p>		
<p>8. Poor clearance and access?</p> <p>bump/not fit</p> <p>can't see</p>		
<p>9. Freedom to move & stretch?</p> <p>Constant sitting</p> <p>Stand in one place</p>		
<p>10. Uncomfortable environment?</p> <p>vibration</p> <p>temperature extremes</p> <p>glare, shadows, too bright or dark</p>		

Innovation Potential

(Provide sketches)

What improved types of tools are possible?

What type of mechanical assists might be used?

What changes in layout would help?

Would a sit/stand workstation be appropriate?

Would it be feasible to provide a:

stool lean stand footrest

Is there a completely different way of doing the job?

Ergonomics Checklist – Computer Workstation

Name _____ Report to Whom _____

Dept. _____ Phone # _____

Use computer more than 4 hours daily? ___ Use phone more than 1 hour daily? ___

Any employee discomfort? Low back? ___ Neck? ___ Shoulders? ___ Wrists/hands? ___

<i>Issue</i>	<i>Cause</i>	<i>Options</i>
POSTURE		
Bent or Twisted Neck	<input type="checkbox"/> Monitor not in front	<input type="checkbox"/> Move in line; change layout <input type="checkbox"/> Put monitor on swing arm
	<input type="checkbox"/> Monitor too high <input type="checkbox"/> Monitor too low <input type="checkbox"/> Cradle telephone in neck <input type="checkbox"/> Paper lies flat on desk <input type="checkbox"/> Copyholder not in best place	<input type="checkbox"/> Lower, e.g., move hard drive to floor <input type="checkbox"/> Raise: books, risers, stand, arm, etc. <input type="checkbox"/> Headset <input type="checkbox"/> Copyholder (___ extra sturdy) <input type="checkbox"/> Place adjacent to monitor
Rounded, Unsupported, or Twisted Back	<input type="checkbox"/> Insufficient lumbar support <input type="checkbox"/> Sit too far forward in chair	<input type="checkbox"/> Adjust height of seat back <input type="checkbox"/> Lumbar support cushion <input type="checkbox"/> Better chair
	<input type="checkbox"/> Monitor or keyboard not in front	<input type="checkbox"/> Change layout <input type="checkbox"/> Better workstation
Bent Wrists	<input type="checkbox"/> Keyboard tray not at right height <input type="checkbox"/> Keyboard too thick <input type="checkbox"/> Traditional straight keyboard <input type="checkbox"/> Keyboard not at correct tilt relative to forearm	<input type="checkbox"/> Raise or lower <input type="checkbox"/> Provide wrist rest <input type="checkbox"/> Contoured natural keyboard <input type="checkbox"/> Adjust feet on keyboard <input type="checkbox"/> Adjust keyboard tray <input type="checkbox"/> Provide adjustable keyboard tray <input type="checkbox"/> Adjust chair height <input type="checkbox"/> Adjust keyboard height
	<input type="checkbox"/> Mouse too large <input type="checkbox"/> Inappropriate design of mouse	<input type="checkbox"/> Mouse pad wrist rest <input type="checkbox"/> Smaller mouse <input type="checkbox"/> Improved-design mouse <input type="checkbox"/> Switch to touch pad/trackball
Shoulders Hunched; Elbows Away From Sides	<input type="checkbox"/> Desk/keyboard too high	<input type="checkbox"/> Lower desk or keyboard <input type="checkbox"/> Provide keyboard tray or arm <input type="checkbox"/> Raise chair <input type="checkbox"/> Better chair to permit adjustment
	<input type="checkbox"/> Insufficient arm support <input type="checkbox"/> Reach for mouse <input type="checkbox"/> Reach for phone, etc.	<input type="checkbox"/> Adjust arm rests <input type="checkbox"/> Add cushions to arm rests <input type="checkbox"/> Add armrests <input type="checkbox"/> Put mouse on keyboard tray <input type="checkbox"/> Provide keyboard tray with space for mouse <input type="checkbox"/> Move closer, use headset

<i>Issue</i>	<i>Cause</i>	<i>Options</i>
STATIC LOAD	<input type="checkbox"/> Constantly sit <input type="checkbox"/> Unsupported arms <input type="checkbox"/> Discomfort from constantly holding mouse	<input type="checkbox"/> Break up tasks; do alternate work <input type="checkbox"/> Take regular, short stretch breaks <input type="checkbox"/> Adjustable sit/stand workstation <input type="checkbox"/> Keyboard & monitor arms that raise high enough to permit standing <input type="checkbox"/> Adjust chair occasionally <input type="checkbox"/> Adjustable arm rests <input type="checkbox"/> Better chair to permit adjustment <input type="checkbox"/> Alternate hands <input type="checkbox"/> Switch to touch pad/track ball
PRESSURE POINTS		
Behind knees	<input type="checkbox"/> Chair too high	<input type="checkbox"/> Lower chair <input type="checkbox"/> Provide footrest <input type="checkbox"/> Adjust footrest
Buttocks	<input type="checkbox"/> Chair too low	<input type="checkbox"/> Raise chair (<input type="checkbox"/> and raise desk)
Forearms	<input type="checkbox"/> Lean against desk edge	<input type="checkbox"/> Adjust worksurface height <input type="checkbox"/> Pad edge or round down edge
CLEARANCE		
Thighs	<input type="checkbox"/> Desk drawers <input type="checkbox"/> Keyboard tray or support arm	<input type="checkbox"/> Remove drawers <input type="checkbox"/> Replace with thin pencil drawer <input type="checkbox"/> Replace with thin tray or arm <input type="checkbox"/> Raise desk
Knees	<input type="checkbox"/> File drawers (traditional desk)	<input type="checkbox"/> Remove drawers <input type="checkbox"/> Replace desk with "L" workstation <input type="checkbox"/> Move items from under desk
LIGHTING	<input type="checkbox"/> Glare <input type="checkbox"/> Too bright <input type="checkbox"/> Shadows	<input type="checkbox"/> Remove bulbs <input type="checkbox"/> Change diffusers <input type="checkbox"/> Add dimmers <input type="checkbox"/> Provide task light <input type="checkbox"/> Provide indirect lighting <input type="checkbox"/> Provide glare screen <input type="checkbox"/> Close window coverings <input type="checkbox"/> Position monitor perpendicular to windows
NOISE	<input type="checkbox"/> Printers or copying machines <input type="checkbox"/> Telephone ringing <input type="checkbox"/> Other nearby conversations	<input type="checkbox"/> Isolate noisy equipment <input type="checkbox"/> Reduce ring level <input type="checkbox"/> Use alternate sounds <input type="checkbox"/> Change area layouts to isolate voices <input type="checkbox"/> Reduce distracting conversations
GENERAL		<input type="checkbox"/> Provide training on adjustments, layouts, and key concepts

Evaluator(s) _____



Date: _____

Ergonomics “Body Check”

The following is a survey of how your body feels as a result of your job. Please complete the following to the best of your abilities. Obviously, pain and discomfort can be caused by household chores, sporting, and leisure activities; but the concern here is for any work-related problems.

Department _____ Job _____

Do you experience discomfort or pain in any part of your body as a result of your day-to-day work activities. For those body parts affected, please circle the score which you feel best describes your level of comfort.

					
Neck	1	2	3	4	5
Shoulder(s)	1	2	3	4	5
Elbow(s)	1	2	3	4	5
Lower Back	1	2	3	4	5
Forearm(s)	1	2	3	4	5
Wrist/Hand(s)	1	2	3	4	5
Thigh(s)	1	2	3	4	5
Knee(s)	1	2	3	4	5
Lower Leg(s)	1	2	3	4	5
Foot/Ankle(s)	1	2	3	4	5

Is there a specific aspect of the job which you feel causes discomfort for you?

Additional comments or suggestions?

Job Rotation Checklist

The following must occur for each job rotation set-up.

Jobs proposed to be rotated are:

- Has an employee meeting been held to determine interest and gain involvement and input?
- Has each task involved in the proposed rotation been scored to determine precise requirements?
- Has common sense been used in evaluating job rotation possibilities?
- Have all employees involved in the rotation schedule been trained to do all tasks?
- Have all employees been provided an adequate break-in period to insure they are:
 - fully qualified to do all tasks?
 - physically conditioned and accustomed to do the job?
- Has flexibility and consideration been given for individuals in the rotation schedule?
Are there any employees who would have physical difficulty in performing all the tasks?
Can accommodations be made for these individuals?
- Have formal follow-up evaluations using TeamErgo members and supervisors been conducted?
- Are benefits or problems being tracked (increased or decreased injury rates, turnover, employee satisfaction, workers compensation costs, etc.)?

Keep the above documentation on permanent file.

Job Rotation Questionnaire

Name: _____ Date: _____

Department: _____ Job Title: _____

1. Are you currently rotating jobs? Yes No
If no, go to the next question.
If yes:
 - a. Do you like it? Yes No
 - b. If no, why not?

 - c. To what jobs do you rotate?

 - d. How often do you rotate? 1/2 hour hourly two hours Other _____
 - e. Have you received appropriate training for the jobs that you rotate to? Yes No
 2. If you answered no to question 1:
 - a. Would you like to rotate? Yes No
 - b. If no, why not?

 - c. If yes, to what jobs would you like to rotate?

 4. If you indicated on the form that you were having discomfort, have you seen the nurse?
 5. Are there any other comments that you would like to make?

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